

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (currently amended) Method for controlling a direct-injection gasoline engine during regeneration of a lean NOx trap disposed in an exhaust path of the engine, the regeneration characterized by a transition from stratified lean engine operation to homogeneous rich engine operation, comprising:

determining a base desired torque;

estimating ~~a decrease in engine torque~~ discontinuity that would result from transitioning from between stratified lean engine operation to and homogeneous rich engine operation during a lean NOx trap regeneration based on stratified lean engine operation intake gas charges and homogeneous rich engine operation intake gas charges; and

applying a feed-forward compensating ~~control~~ torque to the engine base desired torque during lean NOx trap regeneration in an amount sufficient to compensate for the estimated ~~decrease in engine torque~~ engine torque discontinuity thereby ~~maintaining the base desired torque level during the lean NOx trap regeneration~~.

2. (canceled)

3. (currently amended) The method of claim 1, wherein applying a feed-forward compensating ~~control~~ torque to the engine comprises:

increasing fueling to the engine in an amount sufficient to effect said compensating ~~control~~ torque.

4. (original) The method of claim 1, wherein determining a base desired torque is accomplished in accordance with one or more of a throttle pedal position, a cruise control setting and an idle speed control.

5. (currently amended) The method of claim 1, further comprising:  
determining the end of the lean NOx trap regeneration event; and  
~~ending the step of applying a~~ application of the feed-forward compensating  
~~control torque at the end of the lean NOx trap regeneration.~~

6. (currently amended) System for controlling a direct-injection gasoline engine during regeneration of a lean NOx trap disposed in an exhaust path of the engine, the regeneration characterized by a transition from stratified lean engine operation to homogeneous rich engine operation, comprising:

means for determining a base desired torque;

means for estimating ~~a decrease in engine torque~~ discontinuity that would result from transitioning from between stratified lean engine operation to and homogeneous rich engine operation ~~during a lean NOx trap regeneration based on stratified lean engine operation intake gas charges and homogeneous rich engine operation intake gas charges~~; and

means for applying a feed-forward compensating ~~control torque to the engine~~ base desired torque during lean NOx trap regeneration in an amount sufficient to compensate for the estimated ~~decrease in engine torque~~ engine torque discontinuity ~~thereby maintaining the base desired torque level during the lean NOx trap regeneration.~~

7. (canceled)

8. (currently amended) The ~~method~~ system of claim 6, wherein applying a feed-forward compensating ~~control~~ torque to the engine comprises:

means for increasing fueling to the engine in an amount sufficient to effect said compensating ~~control~~ torque.

9. (currently amended) The ~~method~~ system of claim 4 ~~6~~, further comprising:

means for determining the end of the lean NOx trap regeneration event; and

means for ending the ~~step of applying a~~ application of the feed-forward compensating ~~control~~ torque at the end of the lean NOx trap regeneration.

10. (currently amended) Article of manufacture comprising a storage medium having a computer program encoded therein for effecting coordinated control of engine operation and regeneration of a lean NOx trap disposed in an exhaust path of a direct-injection gasoline engine, the regeneration characterized by a transition from stratified lean engine operation to homogeneous rich engine operation, the program comprising:

code for determining a base desired torque;

code for estimating a ~~decrease in engine torque~~ discontinuity that would result from transitioning from between stratified lean engine operation to and homogeneous rich engine operation during a lean NOx trap regeneration based on stratified lean engine operation intake gas charges and homogeneous rich engine operation intake gas charges; and

code for applying a feed-forward compensating ~~control~~ torque to the engine base desired torque during lean NOx trap regeneration in an amount sufficient to compensate for the estimated ~~decrease in engine torque~~ engine torque discontinuity ~~thereby maintaining the base desired torque level during the lean NOx trap regeneration.~~

11. (canceled)

12. (currently amended) The article of claim 10, wherein said code for applying a feed-forward compensating ~~control~~ torque to the engine comprises:  
code for increasing fueling to the engine in an amount sufficient to effect said compensating ~~control~~ torque.

13. (currently amended) The article of claim 10 further comprising:  
code for determining the end of the lean NOx trap regeneration; and  
code for ending the application of the feed-forward compensating ~~control~~ torque at the end of the lean NOx trap regeneration.